

love-37

maadqgiftnsvtlspvegsrtggtlprrafrrscdrchaqkikctgnkevtgrapcqrcqragl
 rcvysercpkrrrlrqrsaadlvsadpdpc1hmssppvpsqslpldvseshssntsrqfldppdsy
 dwsmtsigtdeaidtdcwglscqcdggfscqleptlpdpspfestvekaplppvssdiaraasaq
 relfddlsavsqeleeillavtvewpkqeiwthpigmffnasrrlltv1rqqaqadchqgtldec
 lrtknlftavhcyilnvrltaiselllsqirrtqnshmsplegsrsqspqrddtsssghscvd
 tipffsenlpigelfsyvdplthalfsacttlhvgvqllreyeitlgihsaqgiaasismsgcpg
 ediartgatnsarceeqpttpaarv1fmflsdegafqeaksagsrgrtiaalrrcyedifslark
 hkhgmlrdlnnipp (SEQ ID NO:61)

love-38

maadqgiftnsvtlspvegsrtggtlprrafrrscdrcharkikctgnkevtgrapcqrcqqagl
 rcvysercpkrrklrqrsaadlvsadpdpc1hmssppvpsqslpldvseshssntsrqfldppdsy
 dwsmtsigtdeaidtdcwglscqcdggfscqleptlpdpspfestvekaplppvssdiaraasaq
 relfddlsavsqeleeillavtvewpkqeiwthpigmffnasrrlltv1rqqaqadchqgtldec
 lrtknlftavhcyilnvrltaiselllsqirrtqnshmsplegsrsqslsrddtsssghssvd
 tipffsenlpidelfsyvdplthalfsacttlhvgvqllreneitlgvhsaggiaasismsgelg
 edivrtgatnsarceeqpttpaarv1fmflsdegafqeaksagsrsrtiaalrrcyedifslark
 hkhgmlrdlnnipp (SEQ ID NO:62)

love-39

maadqgiftnsvtlspvegsrtggtlprrafrrscdrchaqkikctgnkevngrapcqrcqqagl
 rcvysercpkrrklrqrsaadlvsadpdpc1hmssppvpsqslpldiseshssntsrqfldppdsy
 dwsmtsigiddeaiddtdcwglscqcdggfscqleptlpdpspfestvekaplppissdiaraasaq
 relfddlsavsqeleeillavtvewpkqeiwthpigmffnasrrlltv1rqqaqadchqgtldec
 lrtknlftavhcyilnvrlalaaiselllsqirrtqnshmsplegsrsqspqrddtsssghssvd
 tipffsenlpigelfsyvdplthalfsacttlhvgvqllreneitlgvhsaggiaasismsgcpg
 ediartgatnsarceeqpttpaarv1fmflsdegafqeaksagsrgrtiaalrrcyedifslark
 hkhgmlrdlnnipp (SEQ ID NO:63)

love-40

maaeqgiftnsvtlspvegsrtggtlprrafrrscdrcharkikctgnkevngrapcqrcqqagl
 rcvysercpkrrklrqrsaadlisadpdpc1hmssppvpsqslplevseshssntsrqfldppdsy
 dwsmtsigtdkaidtdcwglscqcdggfscqleptlpdpspfestvekaplppvssditraasaq
 relfddlsavsqeleeillavtvewpkqeiwthpigmffnasrrlltv1rqqaqadchqgtldec
 lrtknlftavhcyildvrltaiselllsqirrtqnshmsplegsrsqspqrddtsssghssvd
 tipffsenlpigelfsyvdplrhalfsacttlhvgvqllreieitlgvhsargiaasismsgcpg
 ediartgatnsarceeqpttpaarv1fmflsdegtfqeaksagsrgrtiaalrrcyedifslark
 hkhgmlrdlnnipp (SEQ ID NO:64)

love-41

maadqgiftnsvtlspvegsrtggtlprrafrrscdrchaqkikctgnkevtgrapcqrcqqagl
 rcvysercpkrrklrqrsaadlvsadpdpc1hmssppvpsqslpldvseshssntsrqfldppdsy
 nwltmtsigtdeaidtdcwglscqcdggfscqleptlpdpspfestvekaplppvssdiaraasaq
 relfddlsavsqeleeillavtvewpkqeiwthpigmffnasrrlltv1rqqaqadchqgtldec
 lrtknlftavhcyilnvrltaiselllsqirrtqnshmsplegsrsqspsgddtsssghssvd
 tipffsenlpigelfsyvdplthalfsacttlhvgvqllreneitlgvhsaggiaasismsgcpg
 ediartgatnsarceeqpttpaarv1fmflsdegafqegksagsrgrtiaalrrcyedifslark
 hkhgmlrdlnnipp (SEQ ID NO:65)

Table 6: DNA Sequences of Variants of the *lovE* Gene***lovE*-1**

ATGGCTGCAGATCAAGGTATATTACGAACCTGGTCACTCTCGCCAGTGGAGGGTTCACGCAC
 CGGTGGAACATTACCCCGCGTGCATTCCGACGCTCTGTGATCGGTGTCATGCACAAAAGATCA
 AATGTACTGGAAATAAGGAGGTTACTGGCCGTGCTCCCTGTCAAGCGTTGCCAGCAGGCTGGACTT
 CGATGCGTCTACAGTGAGCGATGCCCAAGCGCAAGCTACGCCAATCCAGGGCAGCGGATCTCGT
 CTCTGCTGACCCAGATCCCTGCTTGCACATGTCCTGCCCTCACAGAGCTTGCAC
 TAGACGTATCCGAGTCGATTCCCTCAAATACCTCCGGCAGTTCTTGATCCACCGGACAGCTAC
 GACTGGTGTGGACCTCGATTGGCACTGACGAGGCTATTGACACTGACTGCTGGGGCTGTCCA
 ATGTGATGGAGGCTTCAGCTGTCAAGTGTAGAGCCAACGCTGCCGGATCTACCTTCGCCCTCGAGT
 CTACGGTTGAAAAAGCTCCGTTGCCACCGGTATCGAGCGACATTGCTCGTGCAGGCCAGTGCAC
 CGAGAGCTTTCGATGACCTGTCGGCGGTGCGCAGGAACCTGGAAAGAGATCCTCTGGCCGTGAC
 GGTAGAAATGGCCGAAGCAGGAAATCTGGACCCATCCCATCGGAATGTTTCAATGCGTCACGAC
 GGCTTCTTACTGTCCTGCCAACAGCGCAGGCCACTGCCGTCAAGGCACACTAGACGAATGT
 TTACGGACCAAGAACCTCTTACGGCACTGACACTGTTACATATTGAATGTGCGGATTTGACCGC
 CATATCGGAGTTGCTCCTGCGCAAATTAGGCGGACCCAGAACAGCCATATGAGCCACTGGAAAG
 GGAGTCGATCCAGTCGCCGAGCAGAGACACCAAGCAGCAGCAGGCCACAGCAGTGTGAC
 ACCATACCCTCTTACGGCAAGAACCTCCCTATTGGTGAAGCTGTTCCATGTCGCGTGA
 ACACGCCCTATTCTGGCTTGCACGTTACATGTTGGGTAACATTGCTGCGTGA
 TTACTCTGGGAGTACACTCCGCCAGGGCATTGCACTGCTCCATCAGCATGAGCGGGAACCGAGC
 GAGGATATAGCCAGGACAGGGCGACCAATTCCGCAAGATGCGAGGAGCAGCCGACACTCCAGC
 GGCTCGGGTTTGTTCATGTTGAGTGAAGGGCTTCAGGAGGCAAAGTCTGCTGGTT
 CCCGAGGTGCAACCATCGCAGCACTGCGACGATGCTATGAGGATATCTTCCCTGCCCGAAA
 CACAAACATGGCATGCTCAGAGACCTCAACAAATTCCCTCCATGA (SEQ ID NO: 66)

***lovE*-2**

ATGGCTGCAGATCAAGGTATATTACGAACCTGGTCACTCTCGCCAGTGGAGGGTTCACGCAC
 CGGTGGAACATTACCCCGCGTGCATTCCGACGCTCTGTGATCGGTGTCATGCACAAAAGATCA
 AATGTACTGGAAATAAGGAGGTTACTGGCCGTGCTCCCTGTCAAGCGTTGCCAGCAGGCTGGACTT
 CGATGCGTCTACAGTGAGCGATGCCCAAGCGCAAGCTACGCCAATCCAGGGCAGCGGATCTCGT
 CTCTGCTGACCCAGATCCCTGCTTGCACATGTCCTGCCCTCACAGAGCTTGCAC
 TAGACGTATCCGAGTCGATTCCCTCAAATACCTCCGGCAATTCTTGATCCACCGGACAGCTAC
 GACTGGTGTGGACCTCGATTGGCACTGACGAGGCTATTGACACTGACTGCTGGGGCTGTCCA
 ATGTGATGGAGGCTTCAGCTGTCAAGTGTAGAGCCAACGCTGCCGGATCTACCTTCGCCCTCGAGT
 CTACGGTTGAAAAAGCTCCGTTGCCACCGGTATCGAGCGACATTGCTCGTGCAGGCCAGTGCAC
 CGAGAGCTTTCGATGACCTGTCGGCGGTGCGCAGGAACCTGGAAAGAGATCCTCTGGCCGTGAC
 GGTAGAGTGGCCGAAGCAGGAAATCTGGACCCATCCCATCGGAATGTTTCAATGCGTCACGAC
 GGCTTCTTACTGTCCTGCCAACAGCGCAGGCCACTGCCATCAAGGCACACTAGACGAATGT
 TTACGGACCAAGAACCTCTTACGGCACTGACACTGTTACATATTGAATGTGCGGATTTGACCGC
 CATATCGGAGTTGCTCCTGCGCAAATTAGGCGGACCCAGAACAGCCATATGAGCCACTGGAAAG
 GGAGTCGATCCAGTCGCCGAGCAGAGACACCAAGCAGCAGCAGGCCACGGCAGTGTGAC
 ACCATACCCTCTTACGGAGAACCTCCCTATTGGTGAAGCTGTTCTCCTATGTTGACCCCTGAC
 ACACGCCCTATTCTGGCTTGCACGTTACATGTTGGGTAACATTGCTGCGTGA
 TTACTCTGGGAGTACACTCCGCCAGGGCATTGCACTGCTCCATCAGCATGAGCGGGAACCGAGC
 GAGGATATAGCCAGGACAGGGCGACCAATTCCGCAAGATGCGAGGAGCAGCCGACCAACTCCAGC
 GGCTCGGGTTTGTTCATGTTGAGTGAAGGGCTTCAGGAGGCAAAGTCTGCTGGTT
 CCCGAGGTGCAACCATCGCAGCACTGCGACGATGCTATGAGGATATCTTCCCTGCCCGAAA
 CACAAACATGGCATGCTCAGAGACCTCAACAAATTCCCTCCATGA (SEQ ID NO: 67)

Love-3

ATGGCTGCAGATCAAGGTATATTACGAACCTCGTCACTCTCTGCCAGTGGAGGGTTACGCAC
 CGGTGGAACATTACCCCGCGTGCATTCCGACGCTCTGTGATCGGTGTCATGCACAAAAGATCA
 AATGTACTGGAAATAAGGAGGTTACTGGCCGTGCTCCCTGTCAAGCAGCAGCAGGCTGGACTT
 CGATCGTCTACAGTGAGCGACGCCAAGCGCAAGCTACGCAATCCAGGGTAGCGGATCTCGT
 CTCTGCTGACCCAGATCCCTGCTTGCACATGTCCTGCCCTCAGTGCCTCACAGAGCTGCCGC
 TAGACGTATCCGAGTCGATTCCCTCAAATACCTCCCGCAATTCTTGATCCACCGGACAGCTAC
 GACTGGCTGATCTGGACTGACGGAGGCTATTGACACTGACTGCTGGGGCTGTCCA
 ATGTGATGGAGGCTTCAGCTGTCAGTTAGAGCCAACGCTGCCGGATCTACCTTCGCCCTCGAGT
 CTACGGTTGAAAAGCTCCGTTGCCACCGGTATCGAGCGACATTGCTCGTGCAGGCCAGTGCAC
 CGAGAGCTTCGATGACCTGCGCGGTGCGCAGGAACCTGGAAGAGATCCTCTGGCCGTGAC
 GGTAGAATGGCGAAGCAGGAACCTGGAACCCATCCCATCGGAATGTTCAATGCGTCACGAC
 GGCTTCTTACTGTCCTGCCAACAGCGCAGGCCACTGCCATCAAGGCACACTAGACGAATGT
 TTACGGACCAAGAACCTCTTACGGCAGTACACTGTTACATATTGAATGTGCGGATTTGACCGC
 CATATCGGAGTTGCTCTGCAAAATTAGCGGACCCAGAACGCCATATGAGCCACTGGAAAG
 GGAGTCGATCCAGTCGCCAGCAGCACCCAGCAGCAGCGGCCACAGCAGTGTGAC
 ACCATACCCTCTTAGCGAGAACCTCCATTGGTAGCTGTTCTCTATGTTGACCCCCCTGAC
 ACACGCCCTATTCTCGGCTTGCACAGCTTACATGTTGGGTACAATTGCTCGTGTGAGAATGAGA
 TTACTCTGGGAGTACACTCCGCCAGGGCATTGCACTGCTCCATCAGCATGAGCGGGAAACCAGGC
 GAGGATATAGCCAGGACAGGGCGACCAATTCCGAAGATGCGAGGAGCAGCCGACACTCCAGC
 GGCTCGGGTTTGTTGTTGAGTGAAGGGGCTTCCAGGAGGCAAAGTCTGCTGGTT
 CCCGAGGTCGAACCATCGCAGCAGTGCGACGATGCTATGAGGATATCTTCCCTGCCCGAAA
 CACAAACATGGCATGCTCAGAGACCTCAACAAATTCCCTCCATGA (SEQ ID NO: 68)

Love-4

ATGGCTGCAGATCAAGGTATATTACGAACCTCGTCACTCTCTGCCAGTGGAGGGTTACGCAC
 CGGTGGAACATTACCCCGCGTGCATTCCGACGCTCTGTGATCGGTGTCATGCACAAAAGATCA
 AATGTACTGGAAATAAGGAGGTTACTGGCCGTGCTCCCTGTCAAGCAGCAGGCTGGACTT
 CGATCGTCTACAGTGAGCGACGCCAAGCGCAAGCTACGCAATCCAGGGCAGCGGATCTCGT
 CTCTGCTGACCCAGATCCCTGCTTGCACATGTCCTGCCCTCAGTGCCTCACAGAGCTGCCGC
 TAGACGTATCCGAGTCGATTCCCTCAAATACCTCCCGCAATTCTTGATCCACCGGACAGCTAC
 GACTGGCTGAGCTCGATTGGACTGACGGAGGCTATTGACACTGACTGCTGGGGCTGTCCA
 ATGTGATGGAGGCTTCAGCTGTCAGTTAGAGCCAACGCTGCCGGATCTACCTTCGCCCTCGAGT
 CTACGGTTGAAAAGCTCCGTTGCCACCGGTATCGAGCGACATTGCTCGTGCAGGCCAGTGCAC
 CGAGAGCTTCGATGACCTGCGCGGTGCGCAGGAACCTGGAAGAGATCCTCTGGCCGTGAC
 GGTAGAATGGCGAAGCAGGAACCTGGAACCCATCCCATCGGAATGTTCAATGCGTCACGAC
 GGCTTCTTACTGTCCTGCCAACAGCGCAGGCCACTGCCATCAAGGCACACTAGACGAATGT
 TTACGGACCAAGAACCTCTTACGGCAGTACACTGTTACATATTGAATGTGCGGATTTGACCGC
 CATATCGGAGTTGCTCTGCAAAATTAGCGGACCCAGAACGCCATATGAGCCACTGGAAAG
 GGAGTCGATCCAGTCGCCAGCAGCACCCAGCAGCAGCGGCCACAGCAGTGTGAC
 ACCATACCCTCTTAGCGAGAACCTCCATTGGTAGCTGTTCTCTATGTTGACCCCCCTGAC
 ACACGCCCTATTCTCGGCTTGCACAGCTTACATGTTGGGTACAATTGCTCGTGTGAGAATGAGA
 TTACTCTGGGAGTACACTCCGCCAGGGCATTGCACTGCTCCATCAGCATGAGCGGGAAACCAGGC
 GAGGATATAGCCAGGACAGGGCGACCAATTCCGAAGATGCGAGGAGCAGCCGACACTCCAGC
 GGCTCGGGTTTGTTGTTGAGTGAAGGGGCTTCCAGGAGGCAAAGTCTGCTGGTT
 CCCGAGGTCGAACCATCGCAGCAGTGCGACGATGCTATGAGGATATCTTCCCTGCCCGAAA
 CACAAACATGGCATGCTCAGAGACCTCAACAAATTCCCTCCATGA (SEQ ID NO: 69)